

CMOS 8-bit Single Chip Microcomputer

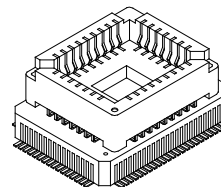
Description

The CXP83400/83401 is a CMOS 8-bit single chip microcomputer of piggyback/evaluator combined type, which is developed for evaluating the function of the CXP83412/83416.

Features

- A wide instruction set (213 instructions) which covers various types of data.
 - 16-bit operation/multiplication and division/Boolean bit operation instructions
- Minimum instruction cycle
 - 400ns at 10MHz operation
 - 32kHz at 122μs operation
- Applicable EPROM
 - LCC type 27C128, LCC type 27C256
 - (Maximum 16K bytes are available.)
- Incorporated RAM capacity
 - 448 bytes (LCD display data area included)
- Peripheral functions
 - A/D converter
 - 8 bits, 8 channels, successive approximation method
 - (Conversion time of 32μs/10MHz)
 - Serial interface
 - Incorporated 8-bit and 8-stage FIFO
 - (Auto transfer for 1 to 8 bytes), 1 circuit 2 channels
 - Timer
 - 8-bit timer, 8-bit timer/counter, 19-bit time base timer, 32kHz timer/counter
 - LCD controller/driver
 - Maximum 128 segments display possible (During 1/4 duty)
 - 4 common outputs, 32 segment outputs
 - Display method: Static, 1/2, 1/3 and 1/4 duty
 - Bias method: 1/2 and 1/3 bias
 - Remote control reception circuit
 - 8-bit pulse measurement counter with on-chip 6-stage FIFO
 - PWM output
 - 14 bits 1 channel, 8 bits 1channel
- Interruption
 - 12 factors, 12 vectors, multi-interruption possible
- Standby mode
 - Sleep/stop
- Package
 - 80-pin ceramic PQFP

80 pin PQFP (Ceramic)



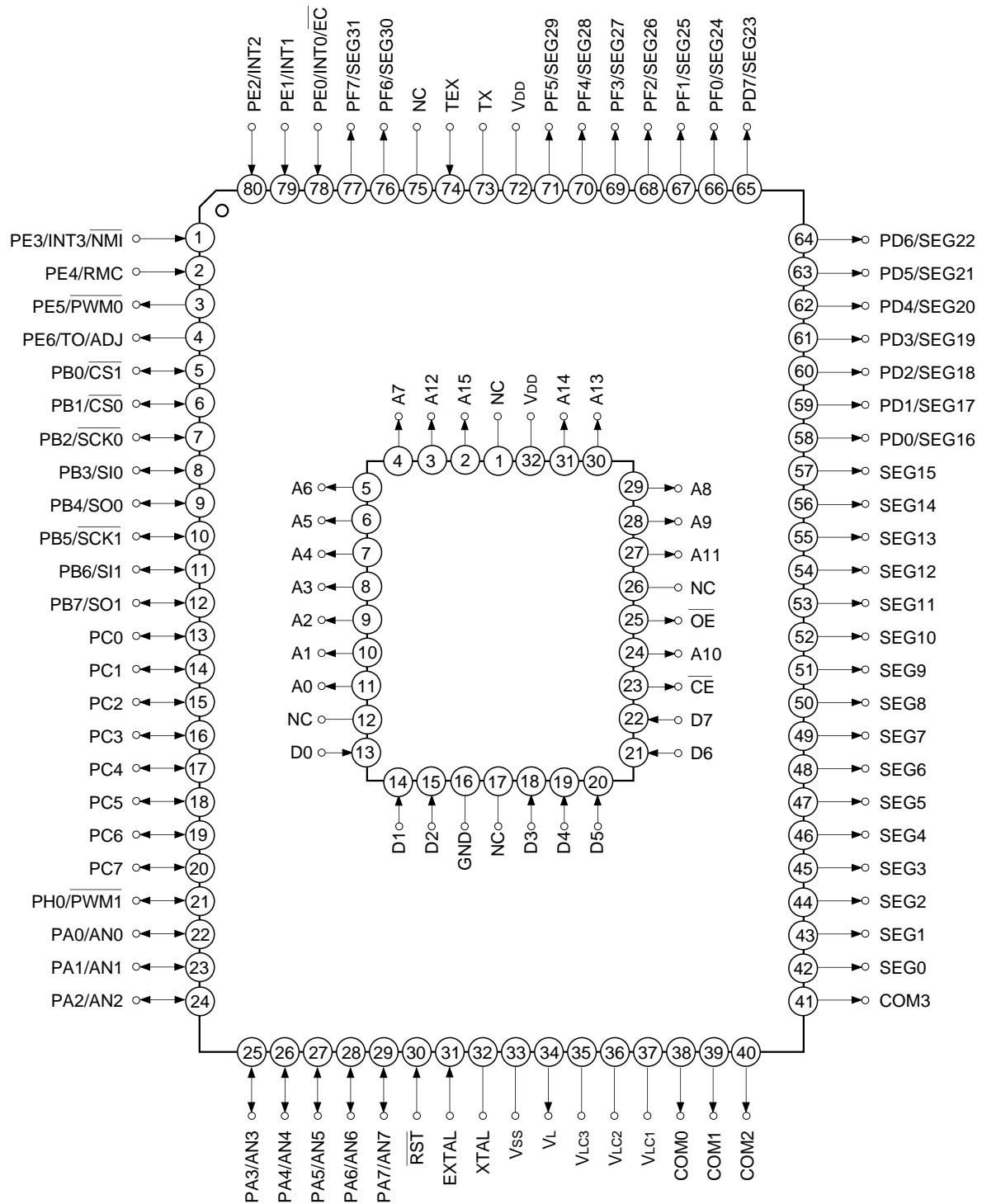
Note) Mask option depends on the type of the CXP83400. Refer to the Products List for details.

Structure

Silicon gate CMOS IC

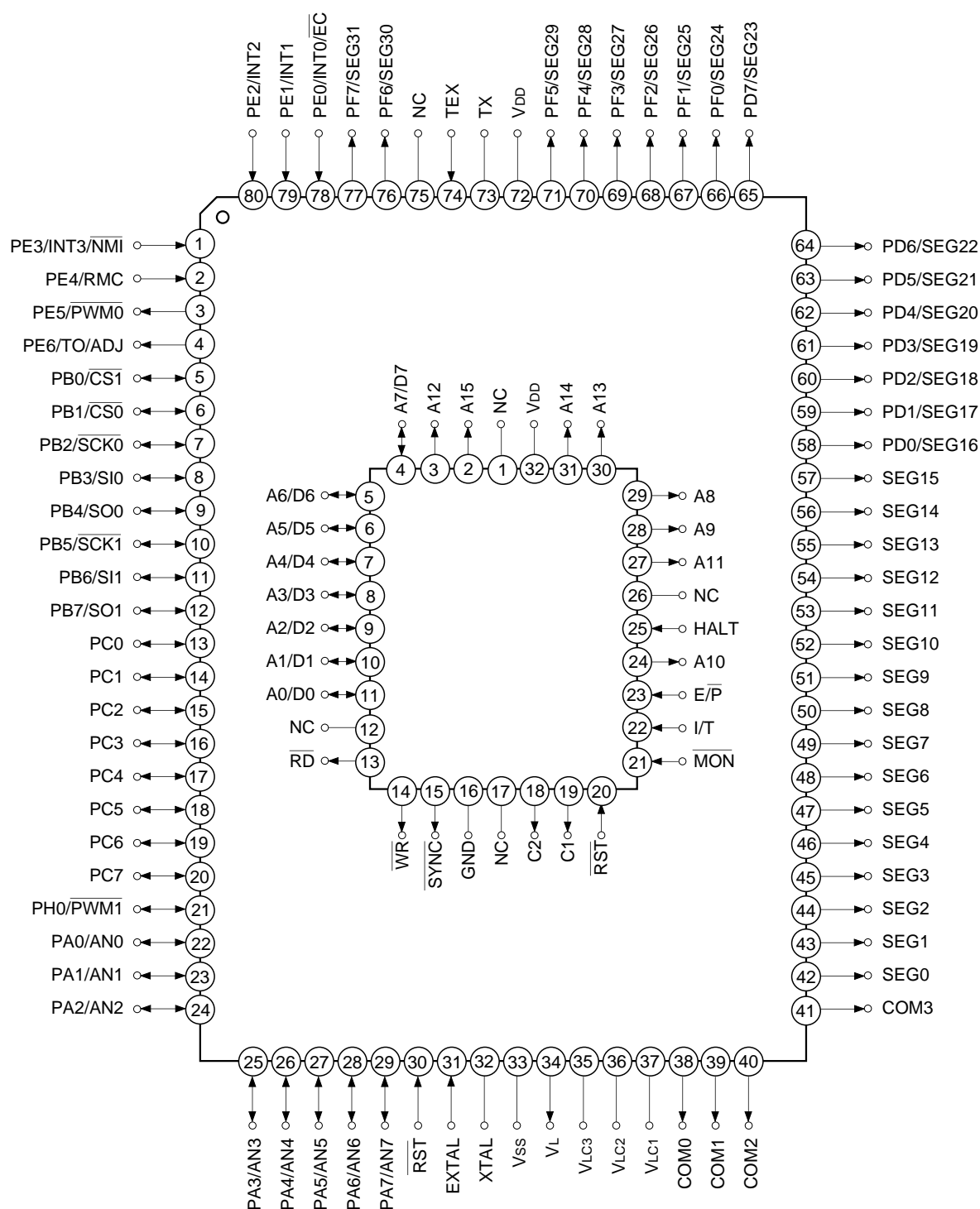
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Pin Assignment in Piggyback Mode



Note) NC (Pin 75) is always connected to VDD.

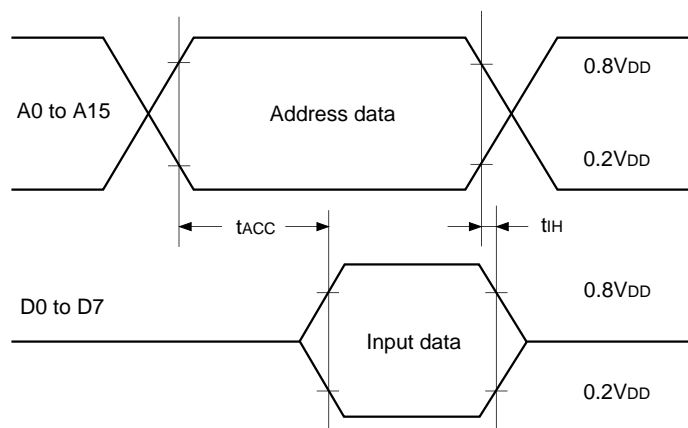
Pin Assignment in Evaluator Mode



Note) NC (Pin 75) is always connected to VDD.

EPROM Read Timing(Ta = -20 to +75°C, V_{DD} = 4.5 to 5.5V, V_{SS} = 0V reference)

Item	Symbol	Pin	Min.	Max.	Unit
Address → data Input delay time	t _{ACC}	A0 to A15 D0 to D7		120	ns
Address → data Hold time	t _{IH}	A0 to A15 D0 to D7	0		ns

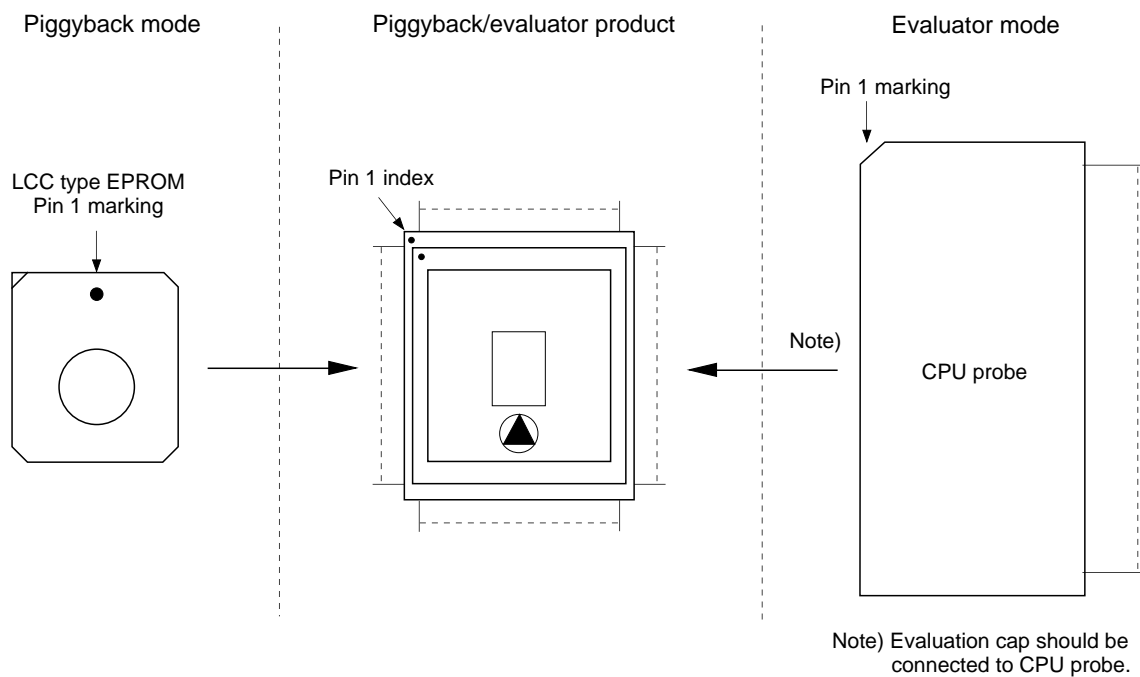
**Products List**

Option item	Products					
	Mask product				Piggyback/evaluator product	
	CXP83412	CXP83416	CXP83413	CXP83417	CXP83400-U01Q/R ^{*1}	CXP83401-U01Q ^{*2}
Package	80-pin plastic QFP/LQFP		0.65mm pitch 80-pin plastic QFP		80-pin ceramic PQFP	
ROM capacity	12K bytes	16K bytes	12K bytes	16K bytes	EPROM 16K bytes	
Pull-up resistor for reset pin	Existent/Non-existent				Existent	

*1 Uses LQFP package conversion adaptor (SEK-80Q-80LQ, piggyback/evaluator attached).

*2 Uses 0.65mm pitch QFP package conversion adaptor (SEK-80Q-65MM, piggyback/evaluator attached).

Piggyback mode/evaluator mode can be switched as shown below.



Package Outline

Unit: mm

80PIN PQFP (CERAMIC)

